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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/078,710	02/21/2002	Motohisa Nishina	0033-0789P	6233

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[REDACTED] EXAMINER

BETTENDORF, JUSTIN P

[REDACTED] ART UNIT [REDACTED] PAPER NUMBER

2817

DATE MAILED: 02/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/078,710	NISHINA, MOTOHISA
	Examiner Justin P. Bettendorf	Art Unit 2817

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-7 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 21 February 2002 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).\* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art figures 10-13 and description thereof (hereinafter "AAPA figures 10-13") in view of Kanda et al. United States Patent No. 5,630,226.

The AAPA figure 10 shows a satellite broadcast receiving device comprising: a chassis 232; first and second printed circuit boards 234, 236; and respective local oscillation circuits 218, 212 located on the ground planes 246. Figure 11 shows the contact pin 262 that connects the two power supplies for the oscillation circuits and figure 13 shows all of the holes formed through the various boards and ground planes (with respect to claim 2). However, the AAPA figure 10 does not show part of the chassis as forming the ground planes.

The Kanda et al. reference discloses in figure 1 two circuit boards 37, 37a located on opposing ground planes of a part of the chassis 39 in a satellite receiver device thereby realizing a smaller structure (col. 4, lines 22-31).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the invention to have formed the first and second oscillation circuits with respective circuit boards on either side of a portion of the chassis serving as two ground planes in the device AAPA figure 10 as taught by Kanda et al. (i.e. substitution of the chassis partition ground plane

in place of the ground planes 246) because such a modification would have advantageously reduced the size of the receiving device.

3. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA figures 10-13 in view of Kanda et al. as applied to claim 2 above, and further in view of Saitoh et al. United States Patent No. 4,353,132.

As noted above, the AAPA figures 10-13/Kanda et al. device suggests a contact pin that is necessarily inserted through holes in the printed circuit boards and chassis partition ground planes but does not disclose that the contact pin has a head.

Saitoh et al. discloses in figure 6 a receiver device with contact pins 23, 24 having a head larger than the holes through which the shaft portion goes. The head, as would have been well known, allows the pin to be inserted only a certain amount before stopping.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the invention to have substituted the art-recognized equivalent contact pin with head of Saitoh et al. in place of the headless contact pin of AAPA figures 10-13/Kanda et al. because such a substitution of art-recognized equivalent contact pins would have advantageously facilitated manufacturing.

4. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA figures 10-13 in view of Kanda et al. as applied to claim 2 above, and further in view of Nakamura United States Patent No. 5,584,064.

As noted above, the AAPA figures 10-13/Kanda et al. device suggests two bias supplies but does not disclose the filter structure including L-shaped traps adjacent the contact pin.

The Nakamura reference discloses in figure 1 a satellite receiver device including a DC bias supply G1, G2 with L-shaped traps shown near 3, 13 as well as stubs that are also shown that are well known to remove unwanted signals from the bias circuit.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the invention to have added L-shaped trap stubs as exemplified by Nakamura to the device of AAPA figures 10-13/Kanda et al. because such a modification would have removed unwanted signals thereby suggesting the modification. With respect to “adjacent”, the broadest, reasonable interpretation means “nearby” which includes everything on each of the circuit boards with respect to the contact pin.

5. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA figures 10-13 in view of Kanda et al. as applied to claim 2 above, and further in view of Nakamura United States Patent No. 6,472,958.

As noted above, the AAPA figures 10-13/Kanda et al. device suggests two bias supplies but does not disclose the filter structure including an LC low pass filter that blocks frequencies at least above 1 GHz.

The Nakamura reference ('958) discloses in figure 2 a low pass filter for the bias supply of a LNB receiver device including a series inductor 12 and a shunted capacitor 14 that block frequencies above 1 GHz (see cols. 3, lines 56-60 and 4, lines 33-38) thereby improving the VSWR (col. 4, lines 55-59).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the invention to have added an LC low pass filter as taught by Nakamura to DC supply bias lines

in the device of AAPA figures 10-13/Kanda et al. because such a modification would have advantageously improved the VSWR.

*Conclusion*

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Nightingale United States Patent No. 4,607,394 discloses filters on the DC bias lines.

b. Kruppa et al. shows a pin with a head that facilitates manufacturing.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin P. Bettendorf whose telephone number is (703) 308-2780. The examiner can normally be reached on 6:00-3:30 (M-F, 1st Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J. Pascal can be reached on (703) 308-4909. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



Justin P. Bettendorf  
Primary Examiner  
Art Unit 2817

jpb  
February 3, 2003